

I. Listing of Claims

Please amend the Claims as follows:

1. (Currently Amended) A retractor for a seat belt system for a vehicle comprising:

a spindle on which a webbing is wound;

a frame for pivotally holding the spindle;

a spindle locking system means for preventing the webbing from drawing out and for stopping rotation of the spindle rotating in a webbing drawing out direction when a rotational acceleration of the spindle is greater than a first predetermined value when the webbing is accelerated in the drawing out direction; and

the spindle locking system means further for stopping rotation of the spindle rotating in the drawing out direction when a deceleration of the vehicle is greater than a second predetermined value;

a first torque generating system which generates torque to rotate the spindle in a winding direction in which the webbing is wound, the first torque generating system being connected to the spindle at all times so as to transmit the generated torque to the spindle, ~~wherein the first torque generating system is configured to rotate the spindle in the winding direction so that a predetermined tension is generated in the webbing;~~

a second torque generating system which generates torque to rotate the spindle in the winding direction; and

a torque transmitting mechanism system which transmits the torque generated by the second torque generating system to the spindle,

a control system for controlling the torque generated by the second torque generating system according to a seat belt fastening state and a dangerous state, the seat belt fastening state being one of a fastened seat belt state and a non-fastened seat belt state;

a seat belt fastening state detecting system incorporated into a buckle, the seat belt fastening detection system being operable to detect the seat belt fastening state based on whether or not a tongue is engaged with the buckle; and

a dangerous state detecting system for detecting whether or not the vehicle is in the dangerous state,

wherein the second torque generating system is used repeatedly, and the torque generated by the first torque generating system ~~is set~~ is configured to be lower than the torque generated by the second torque generating system when each are correspondingly transmitted to the spindle, the first torque generating system generating a lower rotary speed of the spindle than the second torque generating system, wherein the torque generated by the second torque generating system is generated during controlling by the control system, and the torque generated by the first torque generating system ~~corresponding to the preset torque setting is capable of positioning the seat belt for restricting a passenger seated in a seat~~ is capable of restricting a passenger seated in a seat, but incapable of completely winding up the webbing.

2. (Previously Presented) The retractor for the seat belt according to claim 1, wherein the first torque generating system generates torque by a rotary spring force of a spiral spring, and

the second torque generating system generates torque by torque of an electric motor.

3. (Previously Presented) The retractor for the seat belt according to claim 1, wherein when the second torque generating system generates the torque for rotating the spindle in the winding direction, the torque transmitting mechanism system transmits the torque generated by the second torque generating system to the spindle, and

when the second torque generating system generates a second torque for rotating the spindle in the drawing out direction, the torque transmitting mechanism system does not transmit the second torque generated by the second torque generating system to the spindle.

4. (Previously Presented) The retractor for the seat belt according to claim 1, wherein the first torque generating system has a preset torque setting so that a predetermined tension is generated in the webbing when a seat belt user fastens the seat belt.

5. (Previously Presented) The retractor for the seat belt according to claim 1, wherein the torque transmitting mechanism system includes a torque transmission cushioning system for cushioning a torque transmission by an elastic member arranged between the second torque generating system and the spindle, wherein when the torque of the second torque generating system is transmitted

to the spindle, a sudden change in the torque of the second torque generating system is not transmitted to the spindle as a sudden change in torque, and

wherein when the torque of the second torque generating system is transmitted to the spindle, a sudden force given to the spindle in the drawing out direction is not transmitted to the second torque generating system as a sudden change in force.

6. (Previously Presented) The retractor for the seat belt according to claim 5, wherein an elastic force of the elastic member in the power transmission cushioning system is larger than the force generated by the first torque generating system when the elastic member is substantially compressed.

7. (Currently Amended) A retractor for a seat belt system for a vehicle comprising:

a spindle on which a webbing is wound;

a frame for pivotally holding the spindle;

a spindle locking system means for preventing the webbing from drawing out and for stopping rotation of the spindle rotating in a webbing drawing out direction when a rotational acceleration of the spindle is greater than a first predetermined value when the webbing is accelerated in the drawing out direction; and

the spindle locking system means further for stopping rotation of the spindle rotating in the drawing out direction when a deceleration of the vehicle is greater than a second predetermined value;

a first torque generating system which generates torque to rotate the spindle in a winding direction in which the webbing is wound, the first torque generating system being connected to the spindle at all times so as to transmit the generated torque to the spindle, ~~wherein the first torque generating system is configured to rotate the spindle in the winding direction, so that a predetermined tension is generated in the webbing;~~

a second torque generating system which generates torque to rotate the spindle in the winding direction; and

a torque transmitting mechanism system which transmits the torque generated by the second torque generating system to the spindle;

a webbing action detecting system for detecting a webbing action, the webbing action being one of a webbing drawing out state, a webbing winding state, and a webbing stoppage state;

a control system for controlling the torque of the second torque generating system according to a seat belt fastening state and the webbing action detected by the webbing action detecting system, the seat belt fastening state being one of a fastened seat belt state and a non-fastened seat belt state; and

a seat belt fastening detection system integrated into a buckle, the seat belt fastening detection system being operable to detect the seat belt fastening state based on whether or not a tongue is engaged with the buckle,
wherein the second torque generating system is used repeatedly, and the torque generated by the first torque generating system ~~is set~~ is configured to be lower than the torque generated by the second torque generating system when each are correspondingly transmitted to the spindle, the first torque generating system generating

a lower rotary speed of the spindle than the second torque generating system, wherein the torque generated by the second torque generating system is generated during controlling by the control system, and the torque generated by the first torque generating system ~~corresponding to the preset torque setting~~ is capable of positioning the seat belt for restricting a passenger seated in a seat without causing a substantial passenger's oppressive sensation caused by a fastened condition of the seat belt restricting a passenger seated in a seat, but incapable of completely winding up the webbing.

8. (Previously Presented) The retractor for the seat belt according to claim 7, wherein when the seat belt fastening detecting system detects a change from the fastened seat belt state to the non-fastened seat belt state, and the webbing action detecting system further detects that the webbing is in the webbing stoppage state, the control system makes the second torque generating system generate a predetermined intensity of the torque for rotating the spindle in the winding direction.

9. (Previously Presented) The retractor for the seat belt according to claim 7, wherein when the non-fastened seat belt state, the webbing drawing out state, and the webbing stoppage state are detected, the control system makes the second torque generating system generate a predetermined intensity of the torque for rotating the spindle in the winding direction.

10. (Previously Presented) The retractor for the seat belt according to claim 7, wherein when the non-fastened seat belt state and a webbing stoppage state are detected, and when the second torque generating system is generating torque for rotating the spindle in the winding direction,

the control system stops the generation of the torque by the second torque generating system for a predetermined period of time, and then the control system controls the second torque generating system to generate the torque in the drawing direction.

11. (Previously Presented) The retractor for the seat belt according to claim 7, wherein when a change from the non-fastened seatbelt state to the fastened seat belt state is detected, the control system makes the second torque generating system generate the torque for rotating the spindle in the winding direction, and

when the webbing stoppage state is detected, the control system makes the second torque generating system generate torque to rotate the spindle in the drawing out direction for a predetermined period of time.

12. (Previously Presented) The retractor for the seat belt according to claim 7, wherein the webbing action detecting system detects the webbing action by detecting a rotary speed and a rotary direction of the spindle,

wherein when the webbing action detection system detects a predetermined increase in the rotary speed of the spindle in a predetermined period of time, the webbing action detection system determines that the webbing is in the webbing drawing

out state if the webbing action detection system further detects that the rotary direction of the spindle corresponds to the drawing out direction, and the webbing action detecting system determines that the webbing is in the webbing winding state if the webbing action detection system further detects that the rotary direction of the spindle corresponds to the winding direction, and

wherein the webbing action detection system determines that the webbing is in the webbing stoppage state when the webbing is not in either the webbing drawing out state or the webbing winding state.

13. (Previously Presented) The retractor for the seat belt according to claim 7, further comprising:

a dangerous state detecting system for detecting whether or not a vehicle is in a dangerous state, the dangerous state being one of an actual or potential collision,

wherein when the dangerous state detecting system detects the dangerous state and the seat belt fastening detection system detects a fastened seat belt state, the control system makes the second torque generating system generate the torque for rotating the spindle in the winding direction.

14. (Previously Presented) The retractor for the seat belt according to claim 13, wherein when a change from the dangerous state of the vehicle to a not-dangerous state is detected, the control system makes the second torque generating system generate the torque for rotating the spindle in the winding direction for a predetermined

period of time and at a level higher than a predetermined level of torque required for rotating the spindle, and

wherein the control system further makes the second torque generating system gradually reduce the torque with lapse of time, such that when the second torque generating mechanism stops generating the torque, the control system makes the second torque generating mechanism generate a predetermined intensity of torque for rotating the spindle in the drawing out direction for a predetermined period of time.

15. (Canceled)

16. (Previously Presented) The retractor for the seat belt according to claim 1, wherein when the fastened seat belt state and the dangerous state of the vehicle are detected, the control system makes the second torque generating system generate the torque for rotating the spindle in the winding direction.

17. (Previously Presented) The retractor for the seat belt according to claim 1, wherein when the fastened seat belt state and a change from the dangerous state of the vehicle to a not-dangerous state are detected, the control system makes the second torque generating system generate the torque at a level for rotating the spindle in the winding direction for a predetermined period of time; and

wherein the control system further makes the second torque generating system gradually reduce the torque with lapse of time, such that when the second torque generating mechanism stops generating the torque, the control system makes the

second torque generating system generate a predetermined torque for rotating the spindle in the drawing out direction for a predetermined period of time.

18. (Previously Presented) The retractor for the seat belt according to claim 13, wherein when the dangerous state of the vehicle and a change from the fastened seat belt state to the non-fastened seat belt state are detected, the control system makes the second torque generating system generate a predetermined torque for rotating the spindle in the drawing out direction for a predetermined period of time.

19. (Previously Presented) The retractor for the seat belt as set forth in claim 8, wherein the control system makes the second torque generating system generate the torque at a level greater than a predetermined level of torque required for rotating the spindle in the winding direction.

20. (Previously Presented) The retractor for the seat belt according to claim 3, wherein when the control system makes the second torque generating system generate a rotary torque in the drawing out direction, and when the webbing detecting system detects that an amount of webbing being drawn is greater than a predetermined value, the control system makes the second torque generating system increase a rotary speed.

21. (Previously Presented) The retractor for the seatbelt according to claim 7, wherein the webbing action detecting system detects the webbing action by detecting a rotary speed and a rotary direction of the spindle.